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Miscellaneous

by Janet Coursey

LESSONS LEARNED IN THE LADS TARIFF PROCEEDINGS IN COLORADO

Two weeks ago I watched the sun rise in front of me while driving from Basalt, a small town a couple hundred miles west of Denver. I left my home at 4:30 a.m. to drive through the dawn over Vail Pass to Denver to attend a 9 o'clock hearing at the Colorado Public Utilities Commission (COPUC) regarding US West Communications' application to eliminate the local area data service (LADS) tariff.

Technically and economically, LADS is the best tariff for ISPs to use to provide xDSL service. I help operate Aspen Internet Exchange's (AIX) HDSL network (www.aspn.net). We use the LADS circuits to serve homes and businesses within the approximately three mile radius surrounding our POPs from Aspen to Glenwood Springs.

LADS is a metallic, point-to-point, unloaded 2-wire or 4-wire circuit. In plain language, a customer of the telephone company who orders LADS service is simply ordering a copper pair between two points, and is not ordering a dial tone or any other telco service with the copper. To use the copper pair (sometimes called a "dry pair"), the customer places its own modems at both ends of the line. The practical result can be T-1 speeds at a monthly cost that is far, far less than the cost of getting a T-1 from the telco.

AIX is small ISP, exclusively focused on dedicated access, so we have been watching with interest since June when US West filed the proposal to remove the tariff. As reported at the hearing, so far US West has removed the LADS tariff in seven of its fourteen states, rescinded its petition to remove the service in three states (i.e. those states still have LADS), and have open dockets in four states.

If an ISP hopes to offer xDSL service, the survival of the LADS tariff may determine whether it can economically compete against the ILEC's own xDSL services - typically offered through a non- regulated "advanced service" subsidiary company, and not subject to tariffed pricing. We were unable to determine the intra-company transfer price that US West would charge to !Nterprise for the circuits that the new DSL service in Phoenix will use. Clearly the economics vary greatly depending on whether splitters are used to provide voice or dial tone line sharing on the same circuit.

The telephone companies in other parts of the country are also likely to try to eliminate their LADS tariffs. No matter where you are located, act now to install at least one LADS circuit, so that you will be notified if your telco tries to eliminate the LADS tariff. Be alert to such efforts so that you can counter them promptly!

If I knew then what I know now, AIX would have done better at the hearing, in advance of the hearing, during the testimony process, and in education of the COPUC.

The COPUC was quick to learn what was involved, and after our initial response to the filing, became engaged. But be aware how many open dockets and how few staff there are. Things that are obvious to us are new to them. For example, it was not until the hearing that the technical specification for LADS was discussed, and then it was admitted as testimony only with effort. Without this, the administrative judge could have assumed that anarchy ruled - that users could put any equipment they darn well pleased on a circuit. But the spec gives power and spectrum operating envelope for signals placed on the circuit.

Lesson 1 - Order the LADS spec as US West Publication 77314 from Faison Office Products (303-340-3672, or 800-777-3672, $23 on diskette) and read it into the public record of the docket, either as testimony, or refer to it with your comments summarizing the operating provisions and safeguards for US West therein.

US West claimed at the hearing that the tech pub was confidential material, so if you can attach your order form and credit card slip, that should help. Apparently everything it sends to the PUC is stamped "Confidential" as a matter of course; it is your job to determine what is not!

The PUC staff will be learning more about the xDSL world, but the hearing, if it goes to hearing, will be before a judge, who will only take into account the information legally present in the docket. US West made it seem that xDSL was the wild, wild West of unruly ISPs. Somehow we should have legitimized our interest by educating about the broad standards work underway for the HDSL-2 spec and the other DSL formats. The sizes and memberships of those committees should have been referenced, as well as the participating companies like Rockwell and Nortel. The PUC and the judge should be made aware that a deep international shift is ongoing, and that

there is a risk of their state being left behind, or at least being left to the deployment schedule and whims of the ILEC.

Lesson 2 - Set the stage, the world stage. Use a few paragraphs in your testimony or comments for the history of DSL standards, cite some statistics, drop some household names of the manufacturers involved. MCI intervened in the Colorado case, but seemingly on principle only, so I'm afraid our battle was perceived as some small rural ISP wanting to do some funky, odd renegade line use rather than a fundamental battle about how do people get to use the copper in the ground for high-speed data.

US West expressed great concern that the LADS circuits were not remotely testable, and related, that they bore the expense of site visits when trouble calls were made. The first half of this straw man was hard to counter; talk about shadow boxing. Since it is a raw circuit, the basic test is for connectivity, which we can perform with a ohm meter. A more sophisticated test of frequency requires a signal generator and spectrum analyzer, both of which we use as tools in our practice. The only problem we've had has been not getting all the loading coils removed during initial installation. So our private response was, "testing? What testing?" but of course the judge didn't know and still doesn't know, that $15 ohm meter from Radio Shack will do most of the testing.

Lesson 3 - In the docket, describe the equipment needed, its cost and availability, and process of testing a LADS circuit for continuity. State why continuity is important and why other tests are not.

US West harped on about the expense of testing the LADS circuit by requiring a person in the field. And about the potential for interference with other circuits (which we quite respect, any crosstalk affects us too!) We got lucky on this one, but don't leave it to chance.

Lesson 4 - In Colorado at least, LADS is one of several "private line tariffs." For those products, if a service call shows the problem to be US West's, it pays for the trip. If their investigation shows the problem is the customer's problem, the customer pays. Investigate this and get it into the docket. Further note: if a customer's misbehaving equipment causes line trouble, US West has the remedy to disconnect your circuit. That word "remedy" is the important legal term to use - it means they don't have to remove the LADS tariff to fix the problem; they already have remedies at their disposal.

A principal reason for removing the tariff cited by US West was the historically declining demand. The PUC has the ability to request "audits" from the ILEC and a variety of numbers came back. Sometimes the number of circuits was given, and sometimes the number of customers (a customer such as an ISP might have more than one circuit in its name). The statistic given most emphasis at the hearing was that about the same number of circuits existed in the spring and fall of 1997. Because we know that AIX has caused both new circuits and new customers during that time, that means

some other customers dropped the service. No one asked the real question: how many of those customers (circuits) were the same in both counts? We believe that historical use of LADS for "alarm circuits" is being replaced by data service use, even though the totals stayed the same.

Lesson 5 - Help your PUC phrase the audit requests. Clarify number of customers vs. number of circuits. Ask for several snapshots over the past year. You can ask how many customers (circuits) were the same between two snapshots. The names of the customers are confidential so it is important to phrase questions in a way that acknowledges and respects that, otherwise US West will use that as grounds not to answer.

MCI then tried to ask at the hearing whether US West had tried to reverse the decline in demand for LADS circuits, by marketing them, or running a promotion. US West replied that it never marketed any private line services, and MCI tried to introduce some pamphlets. showing advertising for similar circuits (ISDN?). But it was too late! New information cannot be introduced at the hearing (except subject to some legal necessity of response). But clearly we would have liked to supported our hunch that US West had other motives for removing the tariff at this time.

Lesson 6 - Add the US West marketing literature to the docket. We received a flyer touting the speed and reliability of the forthcoming DSL service in our regular business voice line bill in the fall. That, plus copies of the US West web pages describing its services should have been discussed in, and accompanied by, our comments or testimony.

Several verbal skirmishes tried to establish the truth or falsity of whether other tariffed services could replace LADS as "functionally equivalent". Two unbundled circuits back-to-back was the favored one. However at least in Colorado, there is no technical definition of "unbundled loop" so it cannot really be determined whether it meets the tech spec (see Lesson 1 above), or whether unbundled loops might be loaded with no way for a CLEC to force US West to remove the load.

Lesson 7 - Get nitty gritty about the "functionally equivalent" replacements. In your cross examination, request in writing the circuit response characteristics for proposed replacements, and the reference to them in the tariff. Do those lines have a 3 KHz voice limit? State that this means DSL won't work, whereas it will work on LADS. Ask the names of CLECs at your central offices who can provide them to you.

Continuing in the replacement vein, it was furthermore noted that unbundled loops can be ordered only by CLECS, whereas LADS can be ordered by anyone. And that the price for the two loops would be about double the present LADS rate.

Lesson 8 - See if the PUC has a opinion about the cost of an acceptable replacement for a discontinued service. Can twice as costly be considered "equivalent"? Five times? Ten times? In essence, US West is saying we'll

remove the $25 per month LADS but we can offer you the $250 per month T-1 (DS-1). Try to get something in the docket about whether the public interest is served. Make a chart with the proposed replacement pricing. It gets hard for people to understand the spoken numbers. Finally we've tried to keep our customers out of the mess but in retrospect, we should have asked a few eloquent ones, as well as concerned prospective customers, to contact the PUC directly. A nearby hospital would like to connect to a neighboring clinic using LADS. Some schools are considering connecting nearby schools using LADS. They are all waiting to see what happens and the interest expressed by a hospital or school carries weight with the public interest mandate of the PUC.

Lesson 9 - get comments from others, especially educational, medical, senior-care, etc. interested parties. Help them to contact the PUC and express interest in using LADS and describe the purpose.

Finally, back to the beginning, it seems to be common sense that if a party contests the removal of LADS, then the effective date of the removal would be postponed pending the proceeding of that case. But we have been told that some people, or in some states, LADS orders are being refused while the docket is open. Please clarify the situation with your PUC. If orders should be taken, have customers call the PUC with specifics about their US West customer representative: who, when, what they were told. In Colorado, US West finally issued a memo in October to the customer representatives, instructing them to accept orders.

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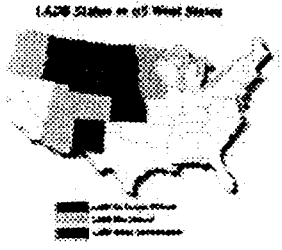
Miscellaneous

By Todd Erickson

AND NOW, FOR THE REST OF THE STORY..



Back in May of 1997 US West filed an application and advice letter with the Colorado Public Utilities Commission (PUC) to grandfather current LADS circuits, and to stop offering new circuits to the public. US West wanted to allow current owners to be able to keep their circuits for five years, and then force them to choose another service. US West also filed the same type of application in 11 of the 13 other states it does business. It is interesting that US West sought to eliminate the circuits soon after ***Boardwatch*** published an editorial by Jack Rickard in the March 1997 issue, urging US West to expand the use of LADS circuits to avoid switched circuit overload. We also published a quick summary of this case in the August 1997 issue of ***Boardwatch***. So you know the news, now here's the rest of the story.

Coincidentally enough, at the same time US West is trying to keep the public from purchasing LADS circuits (which can be used by ISPs to offer low cost xDSL service), US West has begun to roll out its own xDSL services in Arizona and Colorado. Hmmm.

But ISPs and public utilities commissions in some states have shoveled through the bull in US West's filings and have not stood idly by while US West dominates yet another telecommunications market. Unfortunately, other states have let US West eliminate possibly the only xDSL competition, by allowing US West to eliminate the public offering of LADS circuits without even a hearing.

THE FIGHT IN COLORADO

Here in Colorado, thanks to a few active ISPs, MCI, the Public Utilities Commission, and, of course ***Boardwatch Magazine***, US West was not allowed to eliminate this potentially competitive service without a good fight.

Exhibit L
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In fact, US West was not allowed to eliminate the LADS circuits at all. At a December 18 hearing, the administrative law judge assigned to the case by the Commission ruled that US West cannot grandfather existing LADS circuits, or stop offering the circuits to new customers. Representatives and lawyers from the PUC staff, MCI Communications, Boardwatch Magazine, and Carl Oppedahl, a patent lawyer in Summit County, Colorado, offered testimony and cross examination in opposition to US West's application and advice letter. Two ISP owners, Janet Coursey and James Hinsdale of AccNet, offered comments on ISP use of and demand for the LADS circuits.

The judge ruled that US West failed to prove that another telecommunications "provider offers or provides functionally equivalent service.." to LADS, as required by Colorado law (C.R.S. □40-15- 206(1) for you legal eagles). US West's application and advice letter were permanently suspended and canceled. Melissa O'Leary, a lawyer representing US West, said that US West filed an exception to the judge's decision. If US West's exception is rejected, the Commission will adopt the judge's decision by operation of law.

OTHER STATES

US West filed some type of application or notice to eliminate the LADS circuits in 12 of the 14 states where it does business, with mixed results. Below is a quick look at the status of US West's efforts in each state (besides Colorado):

ARIZONA - Jim Fisher, an Executive Consultant with the Utilities Division of the Arizona Corporation Commission, said that US West has not filed to eliminate LADS circuits.

IDAHO - The application was filed in May of 1997, approved , and made effective June 1.

IOWA - The application was filed June 4, and withdrawn on August 27 due to objections by ISPs and other current LADS customers.

MINNESOTA - According to a Minnesota Public Utilities Commission representative, US West has not filed to eliminate LADS circuits.

MONTANA - The LADS service was not regulated, so US West did not need PUC approval to eliminate the circuits. LADS were no longer offered after June 1.

NEBRASKA - The application was filed on May 13, approved and made effective on June 1. **NEW MEXICO** - The application was filed on April 28, and after an October 17 hearing, was approved.

NORTH DAKOTA - The LADS service was not regulated, so US West did not need PUC approval to eliminate the circuits. LADS were no longer offered after June 1.

Exhibit L
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OREGON - The application was filed June 4, and withdrawn on August 27. As of the time of this writing, no other information was available.

SOUTH DAKOTA - The LADS service was not regulated, so US West did not need PUC approval to eliminate the circuits. LADS were no longer offered after June 1.

UTAH - The application was filed in May and is currently under suspension. A representative of the Utah Public Service Commission said the application will not be acted upon unless US West submits such a request.

WASHINGTON - The application was filed in May and withdrawn on September 17. As of the time of this writing, no other information was available.

WYOMING - The application was filed on May 23. A hearing was held on July 9, and a separate docket was opened to determine the Commission's jurisdiction to regulate the service. No hearing is scheduled.

So now you know, the rest of the story.

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POLICY FORUM

by Rudolph Geist

UPDATE: THE FCC'S $2.25 BILLION SCHOOL AND LIBRARY SUBSIDY PROGRAM

In the July 1997 Policy Forum, we discussed a substantial new aspect of the federal Universal Service Fund (USF) program which makes available $2.25 billion per year in subsidies to schools and libraries to help them offset the significant costs of obtaining advanced telecommunications services, including internal wiring, network equipment, and local-loop and backbone connections necessary for getting connected to the Internet. Under this new program, eligible public and private K-12 schools and libraries may apply for funding of advanced telecommunications services that are provisioned beginning January 1, 1998. By the time this article goes to press, the application process for the program should have officially begun, and schools and libraries would have begun filing their requests for proposals (RFPs) for services with the FCC's Schools and Libraries Corporation (SLC), the new entity created for the purpose of administering the program. These RFPs will be posted by the SLC on the specially created web site at www.neca.org. Before a contract may be signed with a provider, the RFP must be posted on the web site for four (4) weeks for competitive bids.

As outlined in the July 1997 Policy Forum, it is vital that ISPs participate in this program to ensure their competitive position vis-...-vis facilities-based telecommunications carriers. Schools and libraries make up a significant portion of the overall telecommunications services market and their demands for services will dramatically increase under this new program. ISPs need to browse the SLC's web site, find the schools and libraries in their service territories that are requesting services, and work with them on proposals.

Even the smallest ISP will likely find schools or libraries with RFPs that are manageable from a bidding standpoint. The important thing is for ISPs to bid on and secure as many school and library contracts as possible under the new program. If ISPs don't act quickly, their facilities-based competitors will be left alone to win these contracts and corner the school and library telecommunications services market.

ISPs that are already serving a number of schools and/or libraries should be especially prepared to compete for the renewal of any existing contracts that are due to expire in the early part of the USF program, i.e., mid-January through March 1998. During the early part of the program, there will be a great degree of activity. Once an existing contract expires, if a school or library seeks to obtain subsidies under the USF on any new services, it will have to engage in the competitive bidding process and cannot simply sign a renewal or extension of the contract.

Further, many schools and libraries that have contracts in place that will not expire within the next few months will desire to obtain program subsidies to pay for services purchased under those contracts. Any contract signed on or before July 10, 1997 will be grandfathered from the program's competitive bidding requirements for the full term of the contract. Thus, a school may apply for USF subsidies on services each year under the contract, without the contract ever having been competitively bid. For contracts signed between July 11, 1997 and the date on which the FCC's web site was officially ready for posting of RFPs (probably late January 1998, but this is not definite because at press time the date was still uncertain), the school may only apply for USF subsidies on services under that existing contract during the first year of the program. Subsidies under these contracts, however, may be obtained in subsequent years, if the FCC's competitive bidding requirements during subsequent years are followed and the existing contract is determined to be the best alternative.

Schools and libraries that apply for funding under the program must fill out an FCC Form 470 (Description of Services Requested) and Form 471 (Services Ordered), which are available for downloading on the SLC's web site. To apply for Internet services or any new telecommunications services or equipment, the school must also have an approved technology plan in place. ISPs interested in pursuit of this business opportunity should work

Exhibit M
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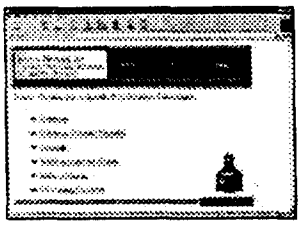
with schools and libraries in their service territories to help them complete their technology plans and FCC applications. Although many schools have grant writers and information systems personnel, the USF requests can be very complex and necessitate assistance for their completion. Thus, ISPs should be fully informed about how the program works and should be prepared to provide whatever assistance is necessary to help a school obtain funding under the program.



With respect to the administration of this program, it appears that the early bird will get the worm. The FCC has decided to provide a 75-day filing window period for applications and contracts to be filed by schools and libraries for funding under the USF program. This period began on the effective date of the program, which was in late January (the exact date was not yet determined when this column went to press), when the application forms became available and the web site on which requests are posted was fully operational.

Applications with signed contracts filed during the 75-day filing window will be treated, for purposes of USF funding, as if they were filed simultaneously. If a school or library does not file both its certification application and a signed service provider contract with the Schools and Libraries Corporation within the 75-day filing window, its funding request will be placed in a processing line. The filing window provides an advantage to schools and libraries and their service providers that have already signed a contract prior to the effective date of the program, as these contracts are not required to go through competitive bidding, which could take a substantial amount of time.

Thus, ISPs pursuing schools and library accounts under this program need to move quickly to get bids on requests for proposals and contracts signed. ISPs must keep in mind that with respect to public schools, they may also have to satisfy local competitive bidding rules to get a contract finalized, which can take additional time.

A few other important notes on the program: This program applies to both public and private K-12 schools and public and private libraries so long as they are non-profit. In states where it is difficult to obtain public school and library contracts because they are banding together in district, county or state- wide network consortiums, there may still be plenty of private schools and libraries that will be seeking subsidies under USF. Notwithstanding, ISPs should aggressively pursue every opportunity to bid on public and private individual and consortium applications.

ISPs obviously stand to benefit greatly from providing connections to schools and libraries under this program. ISPs can receive substantial new business and assist the schools in obtaining much-needed advanced Internet services and network equipment. As a provider for any school, the ISP generates further name recognition and goodwill for providing valuable Internet

services. Once an ISP signs a contract with a school or library and has completed the implementation of the contracted-for services, it will receive direct payment from the participating school or library only as to the percentage of the contract that is non-discounted. For example, if a school obtains a 50 percent subsidy, the school is only required to pay the provider 50 percent of the full contract price. The provider must then seek reimbursement of the remaining 50 percent from the FCC.

ISPs should be well prepared to properly complete these reimbursement requests and navigate the appropriate channels at the FCC to ensure that their requests are properly and timely processed by FCC staff. Getting paid for services provided is probably the most important aspect of the USF program from the provider's perspective, and possibly will be the most challenging. The FCC will be handling thousands of reimbursement requests and it will therefore be imperative that a provider have the ability to shepherd its requests completely and in a timely manner through the FCC.

On a final related note, the FCC has been required to report to Congress no later than April 10, 1998 on implementation of the provisions of the Telecommunications Act of 1996 relating to universal service. There is concern by a number of powerful members of Congress that the FCC has abused its authority in allowing ISPs to participate in the Universal Service Fund. There is even more concern that ISPs are not required to make contributions into the fund based on their revenues, as are all telecommunications carriers. The FCC requested public comment on these issues and specifically on how it should respond to Congress on its implementation of universal service. Many parties commented that the FCC must maintain its flexible regulatory approach to ISPs and information service providers. One very important issue under consideration in this proceeding regards the definitions of "information service", "telecommunications service" and "telecommunications carrier." Many on Capitol Hill and in the telecommunications industry believe that ISPs should be considered telecommunications carriers and the information services they provide should be considered telecommunication services for purposes of regulation and USF funding.

If these individuals get their way, ISPs will surely eventually be subject to a whole new can of worms with respect to regulation. If ISPs are viewed for purposes of legislative policy the same as current telecommunications carriers - local exchange carriers, wireless telephone carriers and long distance carriers - then the FCC may be forced to go against its current policy of an unregulated Internet.

ISPs that want to participate directly in support of the status quo should contact their local member of Congress and/or petition the FCC. Another option is to participate indirectly by joining a trade group that focuses on these issues. This is one of many pressing and ongoing policy issues facing ISPs of which they should be aware and in which they should be involved.

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Editor's Notes

by Jack Rickard

YOU, ME, AND COMPUTER III - THE XDSL ROSETTA STONE

In this issue, we profile the results of some very interesting tests in the 56K modem wars. One of the interesting things about the past year is the number of people new to the industry IN the developer side. It has all seemed a panic of epic proportions to them to such a degree that all ethics and truth have been abandoned in the face of marketing imperatives. To us, it was spring modem fashions 1997 and there'll be another next year.

As it so happens, there already is. The difference between xDSL and the current crop of modems is diminishing rapidly. The final step is to move data off the switch onto bare copper and enjoy a huge leap in bandwidth. Modems will still look and act like modems. The term modem won't make much sense, since they'll neither modulate nor demodulate - a term that has outgrown its time. Undoubtedly we'll call them xDSL modems. As the editor of a magazine titled ***Boardwatch*** that is entirely about Internet service provider issues, I'm familiar with the paradox.

XDSL, or high-speed digital subscriber line technology, is about to come into its day in the sun. This has been one of the most promising technologies to come along in some time for increasing bandwidth to the home.

The bandwidth to the home issue actually goes back decades. The obvious choice 15 years ago was fiber optic cables to each house. But the costs to rewire the "last mile" of the communications network with fiber were astronomical - estimated at $200 billion in the mid-eighties. I made several

predictions back then that have all more or less come to pass.

1. The only way we will ever get fiber into the home is on the back of video. It will not be economically feasible for data applications alone. This has turned out to be quite true. Consumers do like their MTV. And some cable television deployment of fiber has happened, solely for video uses. They are now just beginning to experiment with Internet access over this fiber. The oft discussed plans of telephone companies to fiber homes and deliver video just never happened.

2. It won't matter. We'll develop technologies to deliver bandwidth to the home over ordinary copper. This was derided as the smoke of a madman at the time. But it has been happening incrementally with ever increasing modem speeds, culminating in the current 56K modems that oxymoronically deliver about 48 Kbps. Bonded ISDN has also emerged to deliver 128 Kbps. Now xDSL promises speeds up to 8 Mbps potentially over existing copper lines to homes.

3. The need for varied communication products in the future requires a competitive local telephone company environment. Let every man with a battered `68 Chevy panel truck and a rusty pair of pliers who wants to be a telephone company BE a telephone company. This from an April '88 Boardwatch editorial. Again, this caused actual belly laughs of derision over how wacky I was and how I didn't have a clue and didn't know what I was talking about etc., etc., etc. ad nauseum. I've repeated it over the years and repeatedly have even sympathetic and earnest friends and supporters ask me what I "REALLY" mean by this. I really mean it just the way I wrote it the first time, and it is in plain English. I don't know how to explain it other than to repeat it. If you want to be a telephone company, and have an old truck and a pair of pliers, you should be able to be a telephone company. And we need you if we are ever to get the varied and often specialized services that will be required in the future. The Telecommunications Act of 1996, imperfectly perhaps, mandates this.

It's all coming together in very current fashion. There is a little bit of Internet access over fiber from cable television companies. Penetration of this is miniscule and really will be for much longer than most pundits today can fathom. But copper is ubiquitous. And xDSL has come quite a distance, so to speak.

Distance being most of the problem with xDSL. Initially, it delivered pretty good bandwidth at distances of up to 5,000 feet. Interesting, but not very useful actually. There isn't much within 5,000 feet in our communications network. A new generation claimed 12,000 feet and the world woke up to it a bit. Currently, as distances of 18,000-22,000 linear feet are claimed (a bit of disingenuous confusion between actual performance and vendor claims as always), it becomes intensely interesting. I think it can be extended a bit more

in the future.

Note that this is circuit feet, not feet as the crow flies. And for Internet service providers, total circuit feet includes the distance from the ISP equipment room to the telephone company central office, plus the distance from the telco CO to the subscriber location.

Some ISPs have indeed experimented with xDSL over the past year. But the equipment was somewhat expensive due to the low volumes, and they had a devilish time actually getting circuits. In most cases, bare copper circuits were available from telephone companies. They had been tariffed originally for burglar alarm companies and are usually termed Local Area Data circuits or LAD circuits. You could typically order a LAD circuit between two locations for as little as $30 per month - an oddity at that when full residential telephone service is usually available at $15 and even business service in most markets is typically in the $30 range. But in any event, they were available.

We pointed this out in a March 1997 editorial responding to US West's claim that ISPs were bogging down their voice telephone switches. We somewhat thoroughly debunked this claim, but noted that if there were ANY truth to it, the telcos should be most anxious to get ISPs using LAD circuits and xDSL.

Well, predictably enough they were less than anxious. The regional Bells had, in fact, been engaging in activity that was frankly against the law in most jurisdictions. ISPs would call about LAD circuits and in many cases be told point blank that there was no such thing and they couldn't have it, even when it was tariffed and available.

Worse, in response to our March editorial, US West filed in all fourteen states to remove the LAD circuit tariff. We actually filed to intervene in the proceedings here in Colorado, and we think we have it stopped. A number of local ISPs as well as MCI Communications also got into the act here locally and MCI was very effective in providing information to stop this. But many other states lacking any champion or organized resistance agreed to pull the tariffs and ISPs in those states can no longer order the LAD circuits at all. This basically moved copper availability from the basic services category to unbundled copper available only to competitive telcos and NOT to ISPs. This is a bit key, as you'll see. It's also one of the most viciously anti-competitive acts we've seen from regional Bell operating companies.

This month, a couple of further developments have heated the xDSL area. US West has announced Internet access products using xDSL in 40 cities by June 1998 at various bandwidths and at prices as low as $40 per month. And Microsoft, Intel, and Compaq Computer have joined forces to push xDSL as an access technology. Between the three of them, they do in fact have the smoke to do the volume/price magic trick and make xDSL modems cost about the same as any other modem.

But the RBOCs have a huge advantage currently over local Internet service

providers in providing xDSL. They have access to the copper. And they are very busy making sure ISPs don't have access to the copper. They see this as a way to basically steal the dial-up access market now that smaller companies have demonstrated the market exists.

There are some huge problems lying in wait for the RBOCs. The customer service problem is still there. And there are some mathematical functions regarding end-user bandwidth fanout from available trunks that I don't think they've quite worked out on their magic calculators. US West's announcement to have xDSL in 40 cities, and the product actually being available to customers in those 40 cities, is probably displaced by a time fantasy zone of a couple of years. The company has never had a problem with announcing and advertising products that you can't have.

On a national and policy level, communications companies have had to choose between being a competitive local exchange carrier, or CLEC, and an enhance service provider - ISP for the most part. ISPs have access to "basic" services from telephone companies. CLECs have access to unbundled products such as access to copper. Indeed, some ISPs have actually become CLECs.

But the FCC has just opened an inquiry titled **Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review - Review of Computer III and ONA Safeguards and Requirements**

These titles are truly amazing. You could hardly tell this had anything interesting to do with anything interesting from the title. But the document proposes something quite progressive - allowing ISPs to have access to the same collocation and unbundled copper provisions as CLECs. This would ensure a competitive environment for xDSL where any ISP could in theory deliver xDSL as well.

I received this from an anonymous but well placed source. I'm printing it as most of my editorial this month, along with the full text of the *Computer III Further Remand Proceedings document.*

It is said that old telecommunications issues never die.

Seldom, however, is a wholly new communications community afforded the opportunity to address present difficulties in the review of a decade old regulatory proceeding.

This possibility is now on offer to the over 4, 000 Internet service providers. The question is whether they realize it, and whether they will act.

The name is not engaging: "Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review - Review of Computer III and ONA Safeguards and Requirements" and can be found on the FCC web site at

www.fcc.gov/Bureau s/Common_Carrier/Notices/1998/fcc98008.html. .

The "Computer III" proceeding (as in Computer I, III, and III) has its roots in the early days of the computer-telephone marriage and, initially, addressed the question of whether data processing, computer information and message switching or any combination thereof should be subject to regulation. Later, the FCC distinguished between "basic services" and "enhanced services". The latter involved "computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information, or provide the subscriber additional, different, or restructured information, or involve subscriber interaction with stored information." "ONA" or "open network architecture" was a regulatory attempt to ensure that the recently divested Regional Bell Operating Companies would develop a network that provided for equal access to all providers of enhanced services. It afforded enhanced service providers access to the same "basic service functions" that the telephone companies used to provide their own enhanced services.

ONA is a regulatory construct that was developed in 1985. The World Wide Web had not yet been imagined. The first browser was years in the future. No one was really certain what an "enhanced service" actually was. It is as though the FCC knew that it was on to something, but didn't know exactly what.

Well, as happens, the Computer III decision went to court. Not once but several times.

In the mean time, the Telecommunications Act of 1996 was passed, and, among lots of other things, it required incumbent telephone companies to unbundle network elements and make them available to new, competing telephone companies. But since "enhanced service providers" aren't telephone companies, they are not able to obtain "unbundled network elements" but only "basic service functions". Well, so what? Isn't this just a lot of lawyerly jargon?

Actually, it turns out to be quite important to someone who wants a faster Internet connection. (Don't we all?)

What has happened in the intervening years since the FCC's Computer III decision is that "enhanced service providers" have been morphed into "Internet service providers". And, since they can get only "basic service functions" from your local phone company, they can't go to its central office and demand access to the twisted copper pair of wires that runs to your house. This means your ISP cannot control the "upstream" end of your phone line.

Now, high speed digital lines using technologies generally referred to as "xDSL" require a modem-like device in you home and a modem-like device on your phone line where it emerges from a cable, just before it connects to a switch in the telephone company's central office. That phone line, from

your house to the telephone company's office, is a "local loop" and is also an "unbundled network element" under the terms of the 1996 Act. It is not a "basic service function" under the old ONA regime.

Telephone companies have known about xDSL technology for a number of years now. Why they haven't used it to offer us high speed internet access is a question best addressed to them, although it seems to have to do with other aspects of the Act that would require them to offer this technology to their competitors at prices they regard as insufficient, and to the fact that providing broadband to businesses is more remunerative than providing it to residences.

In any event, the FCC, for the first time in over 12 years, is asking whether internet service providers should have access to the "upstream" side of your phone line in order to offer high speed internet access. The question is being asked now in part because of the Computer III litigation of the past decade.

This issue is encoded within the referenced FCC document. The actual phrasing is: "whether the Commission's current ONA requirements have been effective in providing ISPs with access to the basic services that ISPs need to provide their own information service offerings," and "whether the Commission, under its general rulemaking authority, should extend to ISPs some or all section 251-type unbundling rights, which the Commission previously concluded was not required by section 251 of the Act."

Will the ISP community will break the code, and will any of the 4,000 ISPs seek to differentiate themselves from their telephone competitors by providing residential broadband internet access that most of us would find revolutionary?

Undoubtedly the telcos will voraciously comment on this document while attempting to prevent ISPs from learning of its existence. We have already seen an incredibly devious effort to turn this document into a version of the "modem tax" rumor online. We've received dozens of e-mails from concerned ISPs that this is another attempt by telcos to get ISPs to pay access charges. It is nothing of the sort and the logic behind casting it so is so devilish that I have to suspect telco involvement - though I'm starting to sound paranoid.

In any event, we are reproducing the document in this issue in its entirety. It is also available online. But I would urge every single ISP in the country to actually stop what they're doing, read the thing, and file their own original comment on it with the FCC prior to March 26. I'm not going to provide the convenient form letter, as I abhor such mindless efforts at piling on. But I think every ISP should understand the issues, read this document in its gory entirety, and make their thoughts known formally. Note the section 251 unbundling proposal and make your thoughts on this known sincerely and effectively. With proper enactment, the next wave of modem technology will be available to all players on an equal basis. Without it, you may be left

behind.

Jack Rickard
Editor Rotundus

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BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

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In the Matter of the Application of U S WEST Communications, Inc., for an Order Transferring Right to Exclusively Served Territory to Beaver Creek Cooperative Telephone Company.	)) ORDER

DISPOSITION: PETITION APPROVED.

On April 25, 1997, U S WEST Communications, Inc., (USWC) filed an application for an order authorizing it to transfer approximately one-half square mile of allocated territory to Beaver Creek Cooperative Telephone Company (Beaver Creek). Beaver Creek has petitioned to have that territory allocated to it. The territory would be transferred from USWC's Oregon City exchange to Beaver Creek's Beavercreek exchange. Beaver Creek has been serving customers in the area to be transferred since July 14, 1995. USWC has no customers in the area. The area to be transferred may generally be described as follows:

> The area to be transferred is southeast of Oregon City. It is located along Beaver Creek Road approximately 2.5 miles southeast of the intersection of Beaver Creek Road and Highway 213. The area to be transferred includes the north half of Section 15, T3S, R2E, plus a rectangle in the northeast corner of Section 16, measuring 284 feet east-to-west by 1480 feet north-to-south. The area includes the Fairway Downs housing development.

Attachment A to this order is a revised metes and bounds description of the Beaver Creek exchange after the transfer. Attachment B to this order is a metes and bounds description of the Oregon City exchange after the transfer. The companies will file revised exchange maps reflecting the revised exchanges.

The Commission published a notice of the petition pursuant to ORS 758.420. No request for a hearing was filed. PUC Staff filed a report supporting the petition based on its conclusion that it is more efficient for Beaver Creek to serve the area, as it has been doing, than for USWC to serve the area.

Based on the application and Staff's report, the Commission concludes that the agreement will promote the efficient and economic use and development of the utility systems of the parties to the agreement, while providing adequate and reasonable service to the territories and customers affected by the agreement. The agreement should be approved.